



Inside the world of robotics

Altered images
- double the fun!

**Create your own
LEGO TECHNIC robot**
with our building plan

How brave are you?
Last chance to enter
the LEGO TECHNIC
Building Challenge

**Plus Top Tips,
Club Shop
and lots more!**

LEGO Technic

LEGO

TAKE A LOOK AT THE HI-TEC WORLD OF ROBOTS

Our LEGO TECHNIC Robochopper

(8277) model is an ultra-cool science fiction creation, patrolling the future to keep the forces of evil at bay! But robots don't just belong in the imaginary world. They're a part of everyday life and help people to do all sorts of things!

Robots - or intelligent machines - are used to do tasks that people would find repetitive or dangerous. In fact, the name 'robot' comes from a Czech word meaning 'forced labour'.

Car factories were among the first places to use **robots** and they do jobs like welding and painting. The nuclear industry also uses robots to work in radioactive areas which would be dangerous for people and the Army has **remotely controlled robots** for bomb disposal.

But these **robots** don't look like the metal people of science fiction films. In fact, many of them are much more like their traditional mechanical cousins.



Robots work really fast!



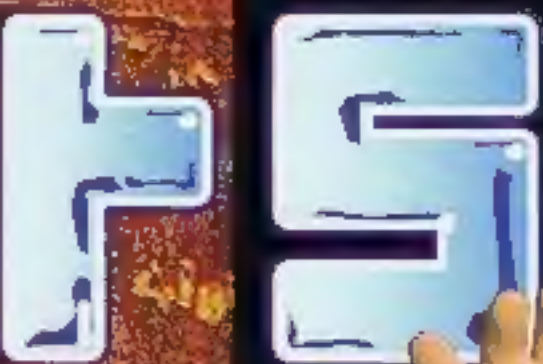
The machines can "learn" complicated jobs like welding - and they never get tired!



"R2, I think you're taking this home mechanic's course a little too far!"

Photograph from BFI Stills Library

So what makes a **robot** different from an ordinary machine, like a drill or a washing machine?



It's really all about how **'intelligent'** the device is rather than how it looks.

For hundreds of years people have built mechanical dolls in human form. The early ones were clockwork, and could pretend to do things like play musical instruments.

But these dolls didn't carry out any real work, and were known as **automata** rather than **robots**.

How **robots** look depends on the types of jobs they have to do. If they need to move, they will be equipped with tracks or wheels and if they have to pick things up

they will have a robot arm attached to them. Some even have television cameras as **'eyes'**!

Today's **robots** can follow sets of complicated instructions and work out which ones best fit the situation they are faced with - in effect, they are **'thinking'** for themselves!

But it is only in this century, with the development of computers, that machines have become **'intelligent'** enough to do some of

the complicated tasks people can carry out. And while these machines have some of the problem-solving skills of people, they are not yet as clever as fictional robots, like Mr Data from Star Trek, who can list playing card games among his abilities!



Robots like Data, or C3PO in the Star Wars films, should more properly be called **'androids'** as they are made in human form: android comes from a Greek

word, **'androeides'** meaning **'man-like'**. People have even imagined robots in the form of animals, like the robot dog, Preston, from the Wallace and Gromit film adventures!

But even with computer control, it will still be a long time before robots can really think for **themselves**.... unless you manage to make your own special adjustments to our LEGO **TECHNIC Robochopper!**

"I'll see if I can programme this robot arm to assemble my LEGO **TECHNIC** sets!"

ROBO-COMP!

COMPETITION

1st Prize

8277 LEGO

TECHNIC Robochopper PLUS a trip around the Ford Motor Company's massive Dagenham plant to see **real robots at work!**

Technic

2nd Prizes

Five 8232 LEGO

TECHNIC Eagle 1 sets

Runners-up Prizes

Ten 8205 LEGO TECHNIC Elastic Turbo drag racers

Just answer the following question....

WHAT WAS THE NAME OF THE FILM WHICH FIRST FEATURED THE ROBOTS R2D2 and C3PO?

- a) Star Trek b) Star Wars
c) Stars in their Eyes

Send your answer on a postcard **ONLY** to:

Robo-Comp, LEGO TECHNIC Magazine, LEGO UK Ltd, Wrexham LL13 7TQ

Remember to put your name, age, address and LEGO TECHNIC Club membership number on your entry!

altered

TAKE A LOOK AT SOME OF
THE **ALTERNATIVE**
MODELS YOU CAN BUILD
FROM THESE **COOL** NEW
LEGO® TECHNIC STARTER SETS!

TAKE TO THE SKIES!

Get airborne
with the **LEGO**
TECHNIC Robochopper
(8277) helicopter. Built from the
same set as the robot featured
on our cover, this **giant** sky
cruiser features rotors that can
be turned with a side-mounted
gear wheel and a swivel-action
camera. The model can be
motorised with set
8720 for **super-realistic**
action!

The chopper
also carries a
sting in its tail,
with a land vehicle
hidden behind the
helicopter's drop-
down tailgate.

IN THE
SHOPS
NOW!

CAT AND MOUSE!

Robochopper (8277) also builds into a
wicked snow cat, with a '**MOUSE**' rover
vehicle hidden in its hinged jaws!

HEY! COME
ON GUYS,
THE
HELICOPTER
WAS
FINE!

altered

YUM!



HEAVY-DUTY FORK LIFT!

Our other **LEGO TECHNIC** starter sets can build some pretty cool alternative models too!

Take a look at this heavy-duty fork lift truck, built from the **LEGO TECHNIC Warthog set (8229)**. The fork lift can be motorised with set 8720.



And don't forget the other **LEGO TECHNIC Starter sets.....** they all build a fab range of alternative models! The **LEGO TECHNIC Eagle 1 aircraft (8232)** is just one of those we didn't have room to show! As well as making a **helicopter** it also builds into an ultra-fast **jet boat!**

BENEATH THE WAVES!



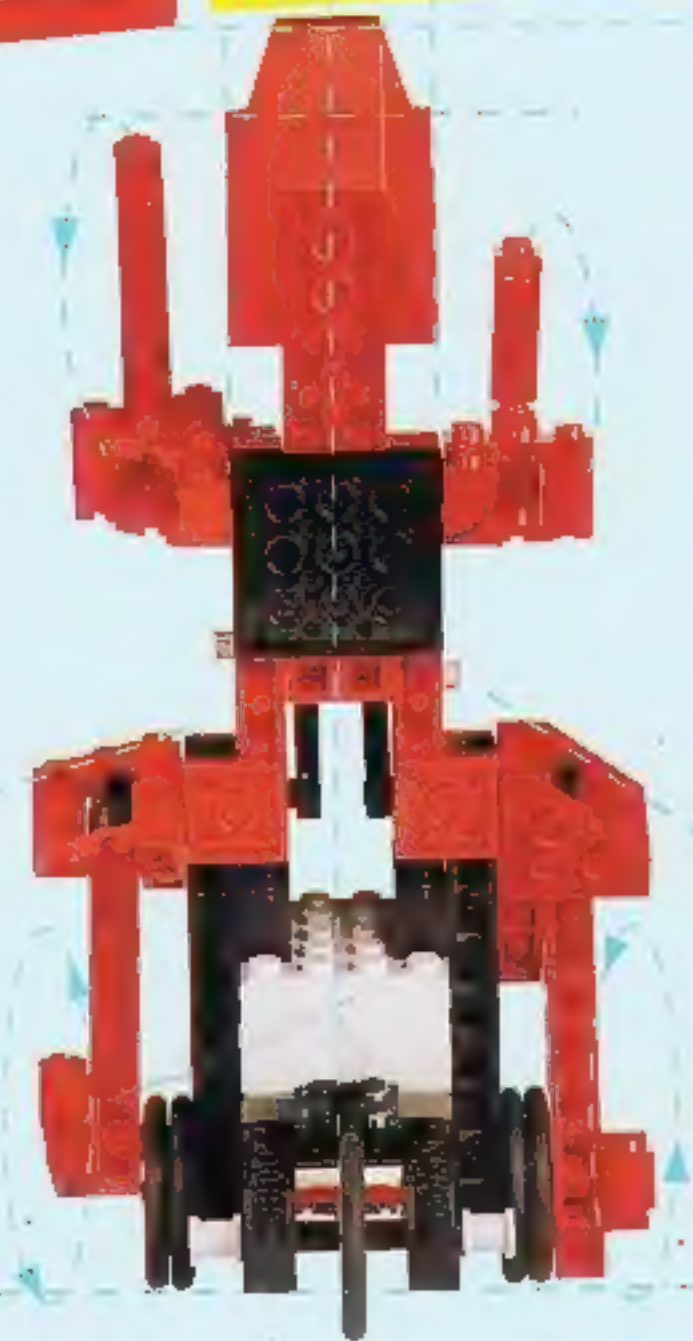
Get ready for **UNDERWATER ACTION** with the **Robochopper (8277)** submarine! Featuring a gearwheel-operated periscope, this **cool** prowler of the deep will take your imagination into uncharted waters!



CLONING

Follow this model as

BACK ELEVATION



With a little imagination,

Don't allow bends in pneumatic tubing the air getting through

HOT TIPS



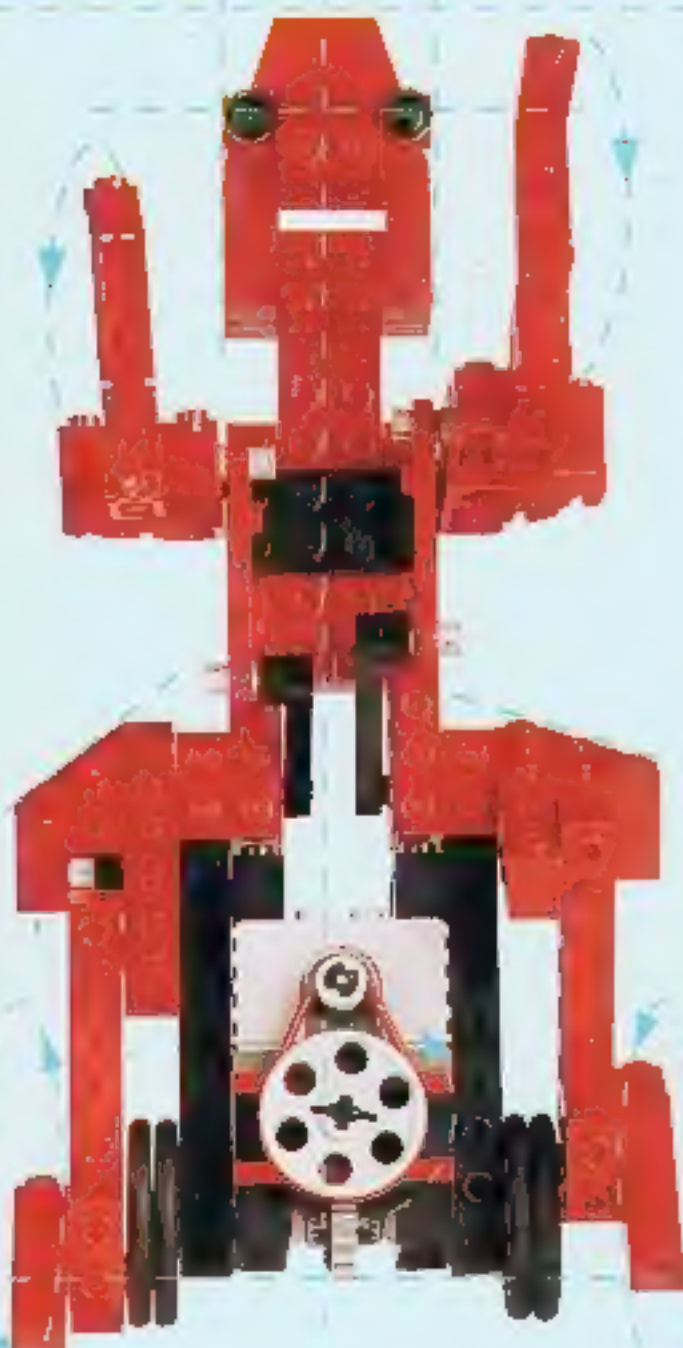
WARG



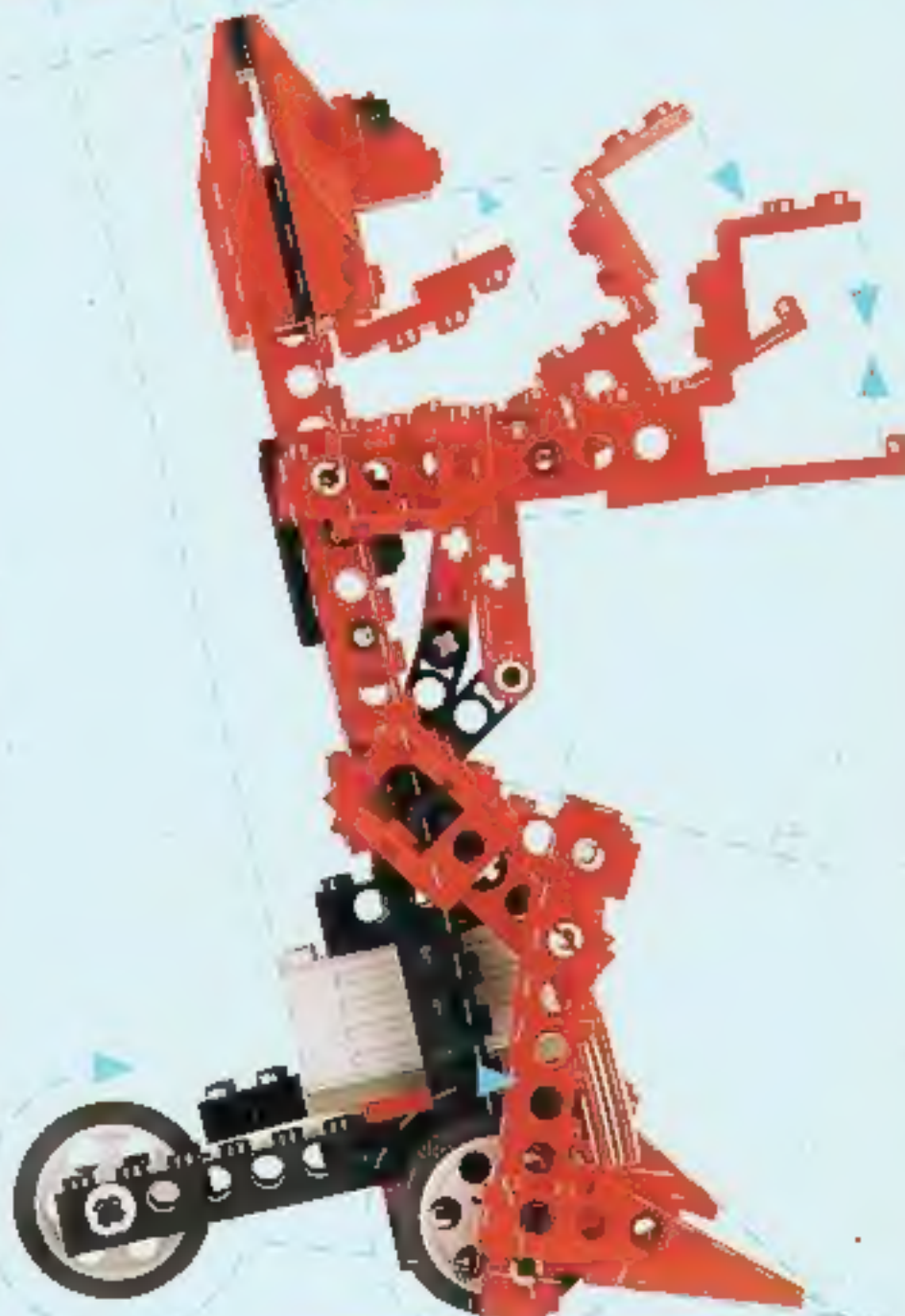
a basic guide

but don't worry if your model looks different.

FRONT ELEVATION



SIDE ELEVATION



who knows what you can come up with!

to occur in
this stops
ough.

When you are following building instructions, it is important to follow them exactly. If something is difficult to understand, flick over to the following pages to see how things are going to develop. This may help you to see what you have to do.

Don't squeeze elements together on cross axles, or they will not move freely.



As you build your models, check all the different functions are working properly at regular intervals. You don't want to get to the final stage and then find out that nothing works!



When building your own models, try to use the elements you have in as many new ways as you can - just like a real engineer!



SOMEWHERE DEEP INSIDE THE LEGO TECHNIC

THE LEGO TECHNIC TEST CREW HAVE HAD ORDERS

RING TO GIVE THIS SUPER SLICK DESIGN THE SERIOUS



THIS **ULTRA COOL** VEHICLE WAS MADE BY HARRY-TREVOR JONES FROM MUCH WENLOCK!

IT'S A **SERIOUSLY COOL** MOTORISED MODEL!



TECH TALK
TECH TALK
TECH TALK

Tring's been buzzin' down his line again. He's been doin' his 'buzziness' - seeking out LEGO TECHNIC builders and sizing them up for LEGO TECHNIC MAGAZINE

Tring's identity is hidden from us. All we know is that he's a LEGO TECHNIC fanatic, hungry for any gen he can get on other LEGO TECHNIC builders. His phone calls could strike any one of you reading now!

So if you want him to pick you out, send in photographs of your favourite LEGO TECHNIC models for Tring's attention - we'll make sure he gets them.

This month, Tring's shout goes out to Harry Trevor Jones, from Much Wenlock, Shropshire.

Harry, tell us something about yourself.

Well, I'm 9 years old and apart from building with my LEGO, my other favourite hobbies are riding my bike and swimming. I also play football and rugby at school.

Why do you like building with LEGO TECHNIC?

I like building with LEGO TECHNIC because it's a real challenge - and lots of fun too!

What are you building now?

I've just got the LEGO TECHNIC Control Centre and I'm really excited about building it. It will be my biggest challenge yet! I'm also designing a LEGO Tanker which I'll also build soon.

What is your favourite LEGO model?

I don't have a favourite model, but I do like my racing car and I liked building the LEGO Space Train.

I've also built models of my pet tarantula which I thought was best!

Where do you get your ideas from?

Well, my Dad helps me with some of my ideas, but I try to build things in everyday life.

How long have you used LEGO bricks?

My Mum and Dad bought me some LEGO bricks when I was very young. I guess I've been building LEGO all my life. I moved on to LEGO TECHNIC about 18 months ago.

That's all for now - but look out for the next issue when it could be you!

Watch this space!

Signed,

Tring.

REMEMBER!

TRING needs PHOTOGRAPHS OF

WORKSHOP

FROM

ONCE OVER

THIS LOOKS LIKE A
VEHICLE THAT'S BUILT
FOR **SERIOUS**
OFF-ROAD
ACTION!



CHECK OUT
THE
CHUNKY
AIR-FILLED
TYRES!

LOADS A
GRIP!!!



COMPETITION WINNERS!!!

QUICK START COMPETITION WINNERS

1ST PRIZES OF 3 LEGO TECHNIC
AMPHIPOWER SETS (8286) GO TO:

ALEXANDER MILLER OF YORK
JAMES CROWLEY OF ENFIELD
DAVID GIFFORD OF MOLD

2ND PRIZES OF 3 LEGO TECHNIC
T-SHIRTS GO TO:

OLIVER PARKES OF CHESTERFIELD
ANTHONY WILSON OF NORMANTON
STEVEN HEYWORTH OF BRISTOL
AARON POWELL OF HORSHAM
GAURAV VYAS OF HESTON
JAMES PICKERING OF USK
SIMON KEEBLE OF LLANARTH
MARK DIXON OF NEWCASTLE

ADVANCE TO GO COMPETITION

1ST PRIZES OF 3 LEGO TECHNIC
PNEUMATIC LOGGER SETS (8443)
GO TO:

WILLIAM FAULKNER OF BIRMINGHAM
ADAM RYDER OF HIGHCLIFF ON SEA
KENNY WONG OF NORTHFIELD

2ND PRIZES OF 3 LEGO TECHNIC
FOOTBALLS GO TO:

BEN CROUCHER OF WEYMOUTH
MARK DIXON OF PORTHILL
PETER SYMONS OF BRIDGWATER
ALASTAIR HILL OF ROYSTON
ALAN R STEWART OF BRECHIN
SANDHEEP FLORA OF SOUTH LANGLEY
DAVID TROON OF DAGENHAM
ALEX GAXTER OF MAIDSTONE

...AND WELL DONE TO ALL THE RUNNERS UP
WHO WILL BE RECEIVING THEIR PRIZES IN THE POST.

WOW!

**THAT
WAS
SOME
TEST
DRIVE!**

YOUR TECHNIC MODELS NOW!

YOUR LAST CHANCE TO ENTER THE GREAT LEGO[®] TECHNIC BUILDING CHALLENGE

**SOREN
HOLM**

**PRODUCT
DEVELOPMENT,
DENMARK**



MESSAGE FROM THE JUDGING PANEL

All the models make good use of the available LEGO TECHNIC elements. The entrants have shown a great deal of imagination, both in their designs and choice of additional items. Keep the photos coming in!

HEY DUDES! How cool are you? **Real cool?** Then prove it when you take on the **GREAT LEGO TECHNIC Building Challenge.**

It's simply right out of this world! It's the biggest, **bestest, coolest,** champion Building Challenge **around.**

And if you haven't yet **DARED** enter the Challenge.... this is

your last chance. So get your **cool building head on** and **get started!**

WANNA KNOW WHAT YOU'RE UP AGAINST...?

This **intriguing** design is by **Zachary Burgess** of **Needham Market, Suffolk.**

Philip Gee from **Birstall, Leicester** sent us this **rugged all-terrain cycle.**

Well-designed **gearing** features in this **space car** from **Adrian Sears** of **Plinner.**

Excellent use of **levers** in this **train** with **rotating chimney** from **Oliver Rumbelow** of **Deal.**

This **great** three-wheeler vehicle comes from **Thomas Smith** of **Isleworth.**

10 TAKE THE CHALLENGE NOW!

HOW TO ENTER

1. Use **AS MANY** of the LEGO TECHNIC elements (illustrated below) as you can. We understand that you won't have everything, but try your best.

2. Your model **MUST** also include 2 GEAR WHEELS of any size or type.

3. As an **EXTRA OPTION** you can use 4 WHEELS, HUBS and TYRES - these can be of any size or type.

4. You can use **AS MANY** cross axles, connector pegs, half shafts, bushes, joggle joints, etc, as you like.

5. You can then add up to 6 **ADDITIONAL ITEMS** of your choice. For example, you may want to add extra gear wheels, a motor, pneumatics - whatever you choose!

NOW IT'S OVER TO YOU

CAN YOU MEET THE CHALLENGE?

Once you've built your model following the instructions, take a photo of it and send it to us at:

The LEGO Technic Building Challenge
LEGO UK Ltd
Wrexham LL13 7TQ

But don't take your model apart as we'll need it if you are a winner!

REMEMBER

IT DOESN'T MATTER WHAT COLOUR THE ELEMENTS ARE IT'S THE DESIGN WE'RE LOOKING FOR!



REMEMBER

YOU MUST INCLUDE 2 GEAR WHEELS OF ANY SIZE OR TYPE. AS AN EXTRA OPTION, YOU CAN USE 4 WHEELS, HUBS AND TYRES - THESE CAN ALSO BE OF ANY SIZE OF TYPE.

And the Prizes?

THEY'RE

KNOCKOUT!!

AS 1st PRIZE WINNER

see **YOUR** LEGO TECHNIC model featured in a future issue - as a Building Plan for other club members to build. You'll also win a great prize from the 1997 LEGO TECHNIC range!

2ND PRIZES

Ten runners-up will each get a **SPECIAL** LEGO TECHNIC Building Challenge Certificate

IMPORTANT LEGO TECHNIC TIP!

REMEMBER

sharp, clear photos only please!

Timothy Farmer from Reading sent in this brilliant off-roader!



CLUB SHOP



CLUB SHOP

MEMBERSHIP NUMBER

NAME _____

ADDRESS

POSTCODE

Cheque/Postal Order should be made

payable to: LEGO U.K. LIMITED or please charge my Access/Visa

Card no: _____ Expiry date _____

Cardholders signature _____

Send to The LEGO TECHNIC Club Shop, Wrexham, LL13 7TQ



LEGO
TECHNIC

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